8804-100-05

NUS CORPORATION
A Halliburton Company

ORIGINAL
(Red)

TDD NO. F3-8804-100
EPA NO. PA-1247
CONTRACT NO. 68-01-7346

FOR THE

FIELD INVESTIGATION TEAM ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCES FACILITIES — ZONE I

NUS CORPORATION
SUPERFUND DIVISION

ORIGINAL
(Red)

R-585-8-8-3

NON-SAMPLING SITE RECONNAISSANCE SUMMARY REPORT
GENERAL CRUSHED STONE COMPANY
PREPARED UNDER

TDD NO. F3-8804-100
EPA NO. PA-1247
CONTRACT NO. 68-01-7346

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

AUGUST 12, 1988

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY	REVIEWED BY	APPROVED BY
(b) (4) [redacted]		

Scope of Work

NUS FIT 3 was tasked to conduct a non-sampling site reconnaissance of the General Crushed Stone Company quarry/asphalt mixing facility, located in Sellersville, Bucks County, Pennsylvania (see figure 1, page 2).

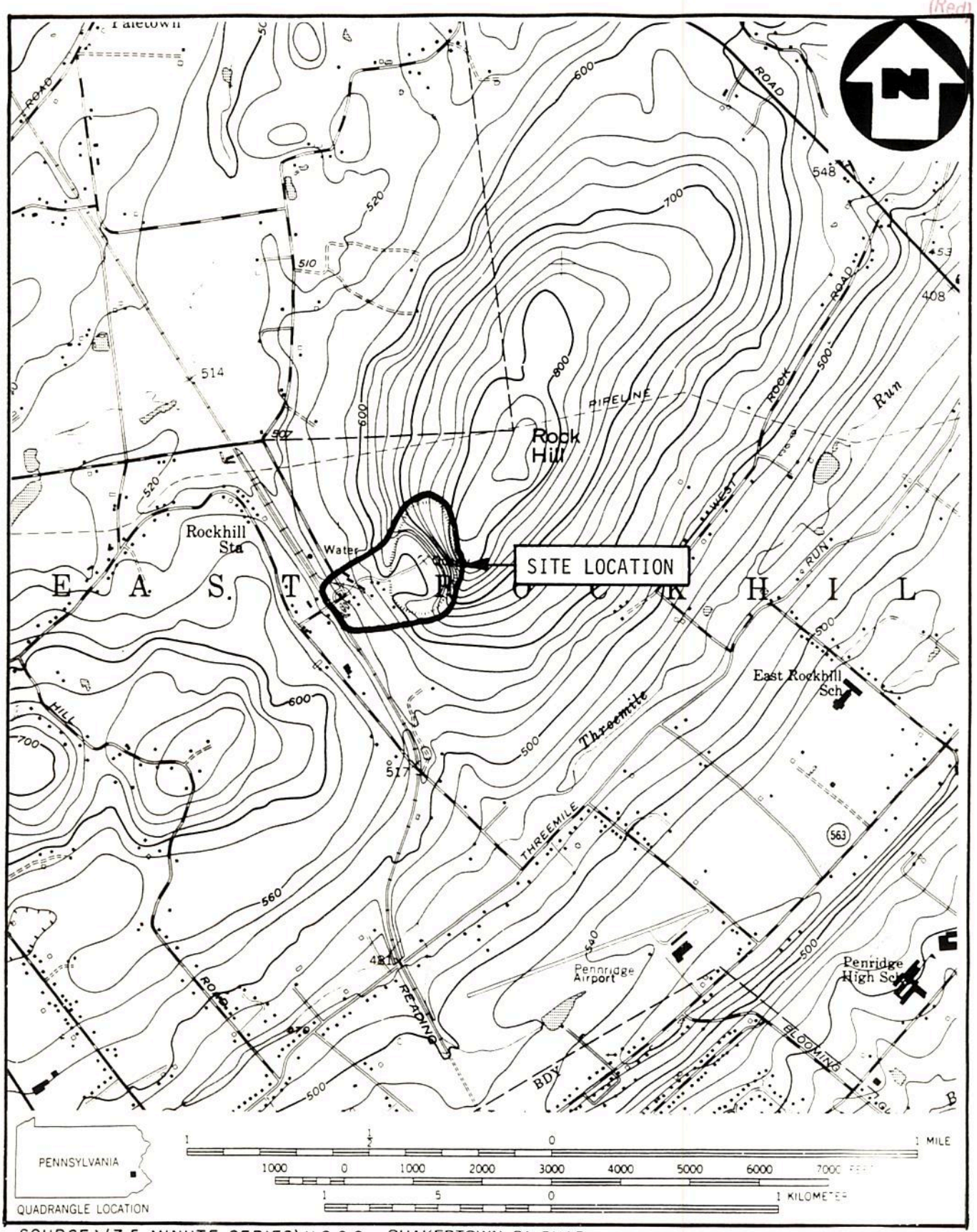
Background Information

The site is situated on approximately 303 acres located off Rockhill Road in Sellersville, Bucks County, Pennsylvania (see figure 2, page 3). The area of concern is 103 acres in size and includes the quarried area, all access roads, all buildings, all stockpiled stone, all buildings, and all sedimentation ponds (all disturbed areas). The property was purchased in 1901 by General Crushed Stone Company. Diabase dike, a hard stone, was quarried from the 1920s until 1981. The quarrying process involved blasting the rock from the quarry area and crushing the rock to specified sizes. In the crushing process, the stone was washed of accumulated fine dust. In the last 50 years of operation, asphalt was brought onto the site and mixed. Since 1981, no quarrying or asphalt mixing has occurred, although 500 tons of stockpiled stone are taken each year to keep the permits active.

The site holds two current Pennsylvania Department of Environmental Resources (PA DER) permits: Bureau of Mining and Land Reclamation No. 79745ml and NPDES Permit No. PA0013684. The parameters of the NPDES permit are pH and suspended solids, with ranges of 6.0 and 9.0 for the pH and 25 mg/l to 45 mg/l for suspended solids.

The site gained the attention of PA DER due to violations involving the lagoons used to settle solids suspended in water by plant processes. Six impoundments had overflowed on three occasions and had discharged into an unnamed tributary of Tohickon Creek. There had been no recorded adverse impact on the environment.

The site is currently inactive, although garages are in use by the Rockhill Construction Company. The Rockhill Construction Company is also owned by General Crushed Stone for work on large earth-moving equipment. The waste oil generated by this work is burned on site in a waste oil furnance.



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. QUAKERTOWN, PA QUAD

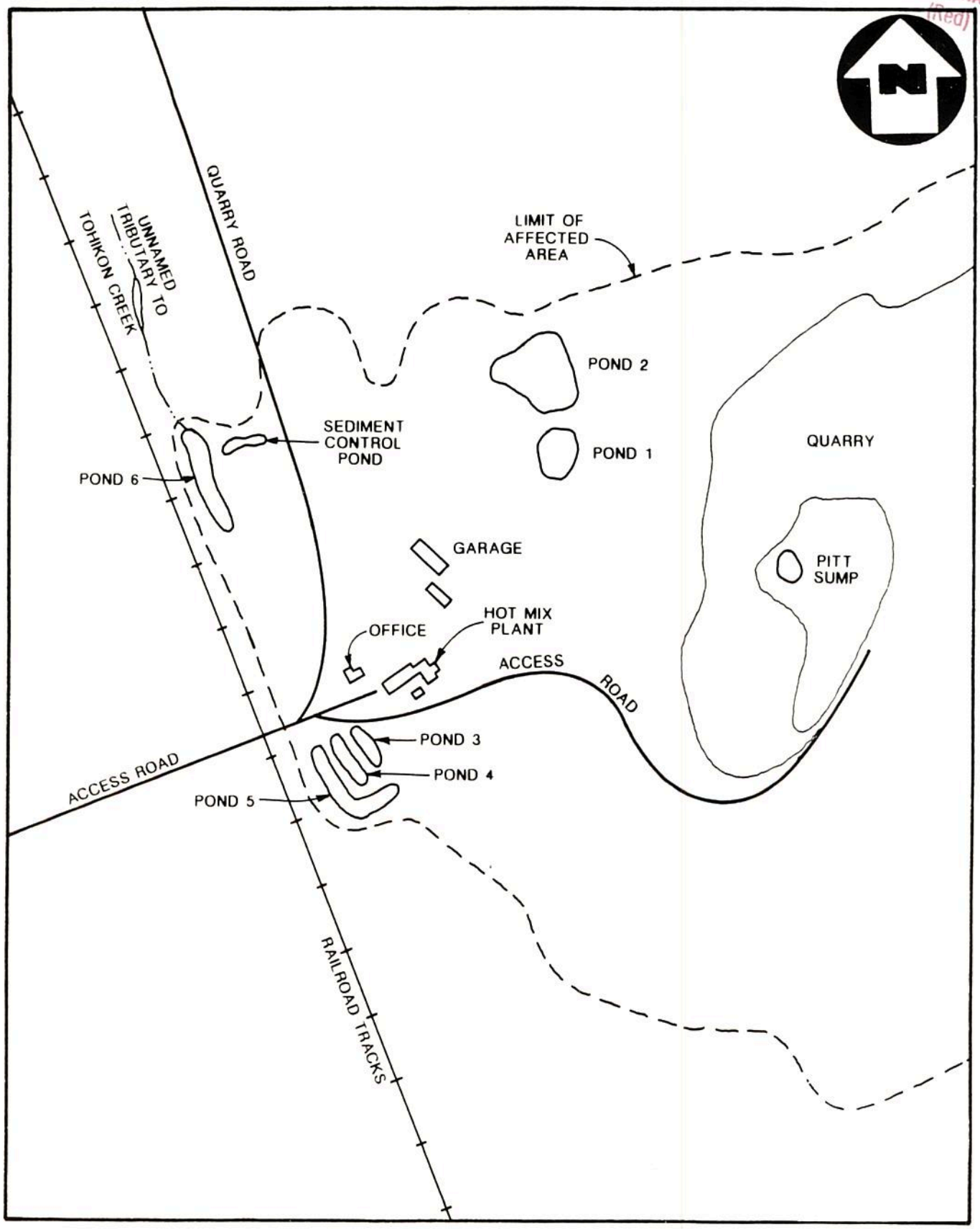
SITE LOCATION MAP

GENERAL CRUSHED STONE, QUAKERTOWN, PA

SCALE 1: 24000

FIGURE 1

NUS CORPORATION



SITE SKETCH

GENERAL CRUSHED STONE, QUAKERTOWN, PA

(NO SCALE)

FIGURE 2

NUS CORPORATION

Sampling to Date

Data concerning on-site sampling by PA DER in 1975 and 1977 are as follows:

	1975	1977
Total solids	238 mg/l	242 mg/l
Suspended solids	30 mg/l	46 mg/l
Settled solids	<0.05 mg/l	<0.05 mg/l
pH	7.6	7.3

Drinking Water Supply

Water is supplied to the immediate site vicinity by private wells. The closest such well is 1/4 mile west. The Perkasie Borough Authority has a well two miles south of the site. Sellersville Water Company has its wells within three miles south of the site. A population of over 10,000 people is served by these 2 water authorities.

Geology Information

The General Crushed Stone quarry lies within the Triassic Lowland Section of the Piedmont Province. The Triassic Lowland is characterized as an uplifted plain formed on soft red sandstone and shale. The higher ridges mark the location of hard volcanic rock or lenses of quartz conglomerate. The average elevation of this plain is 400 to 600 feet; the ridges rise to over 1,200 feet.[1]

The bedrock underlying the site is the Triassic diabase sill that was quarried on site. This sill is a resistant, intrusive rock consisting of nearly equal amounts of plagioclase feldspar, augite, ilminite, quartz, and apatite. The thickness of the sill is variable and ranges from 100 to 300 feet.[2]

The Triassic age Brunswick Formation underlies the diabase sill. The Brunswick Formation is made up of red shales and fine red sandstone. Its stratigraphic thickness is approximately 9,000 feet.

The soils overlying the site have been removed by the quarrying operations. The soil bordering the site to the west is the Towhee extremely stony loam, which is found at the base of hills and ridges. To the north and south is the Towhee silt loam, found in poorly drained areas at the base of slopes. To the east is the Neshanimy extremely stoney silt loam, found at the tops of ridges.[3]

Groundwater Information

Wells within the Triassic diabase average 150 feet in depth. This is the average weathered depth of crystalline rock. The reported yields range between 2 to 200 gallons per minute (gpm), with a median yield of 42 gpm. Specific capacities within the diabase range from 1.27 to 5.29.[2]

Wells within the Brunswick Formation range from 200 to 600 feet or more. The reported yields range from 2 gpm to 260 gpm, with an average of 40 gpm. Specific capacities are highly variable because the formation contains both water-table and artesian aquifers.[2]

Groundwater movement in the area is expected to flow east, orthogonal to topographic contours.

ORIGINAL (Red)

Summary of Activities

On June 16, 1988, NUS FIT 3 personnel (b) (4) [redacted] conducted a non-sampling site reconnaissance of the General Crushed Stone Company, located in Sellersville, Bucks County, Pennsylvania. FIT 3 was accompanied by Jon Reedy, of the General Crushed Stone Company. Weather conditions during the site visit were hazy, hot, and humid, with temperatures in the 90s. Photographs were taken on site (see attachment 1).

Persons Contacted

Prior to Field Trip

Jon Reedy
Assistant Safety Director
General Crushed Stone Company
Easton, PA 18042
(215) 253-4271

Karen Graham
Site Investigation Officer
U.S. EPA
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107
(215) 597-2317

At the Site

Jon Reedy
Assistant Safety Director
General Crushed Stone Company
Easton, PA 18042
(215) 253-4271

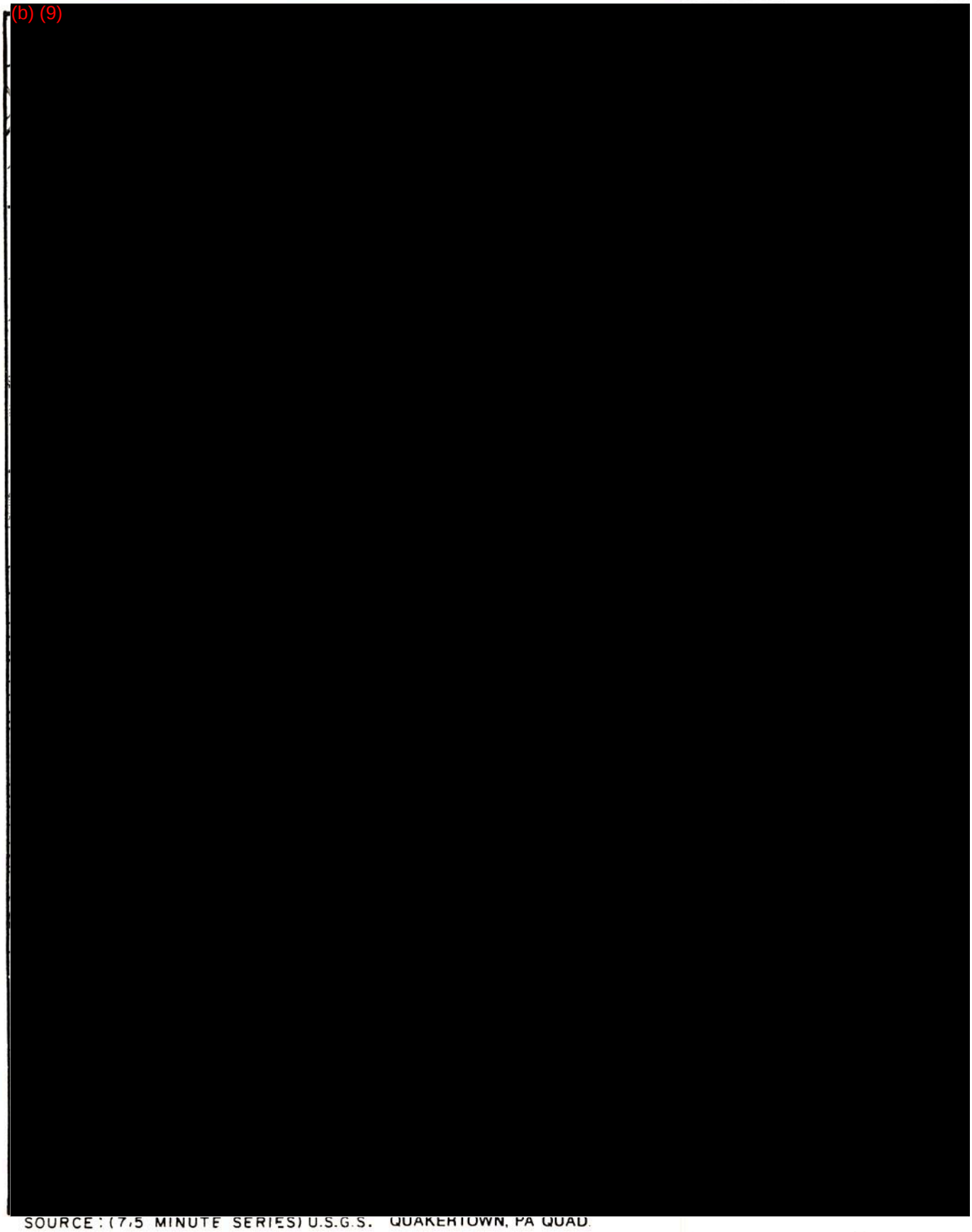
Water Supply Well Information

The majority of the people in the site vicinity utilize private wells (see figure 3, page 7). The municipalities to the south, Perkasie and Sellersville, have their wells within the three-mile radius of the subject site. The nearest residences with private wells live along Rockhill Road, which runs north-south to the west of the site.

Well information was obtained from a home owner along Rockhill Road (see attachment 2). The well is 92 feet deep and has 69 feet of casing. There are no filters used.

Two other home owners were given questionnaires, which have not been returned.

(b) (9)



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. QUAKERTOWN, PA QUAD.

FIGURE 3

HOME WELL LOCATIONS

GENERAL CRUSHED STONE, QUAKERTOWN, PA

SCALE 1: 24000

NUS CORPORATION

Site Observations

- The HNU setting was set on the 0 to 20 scale. The background reading was 0.1 ppm; no readings above background were recorded.
- The mini-alert setting was set at the X1 position; no readings above background were recorded.
- The site is approximately 303 acres in size. The disturbed area is approximately 103 acres in size.
- Access to the site was unrestricted.
- Railroad tracks bordered the site to the west.
- The areas to the north, south, and east of the site were wooded land.
- Abandoned foundations, which had been used to support the asphalt facility, were observed.
- A system of six sedimentation ponds was observed. Two ponds were to the northeast, three were to the southwest, and one was to the northwest.
- The quarry was filled with water. Aquatic life was observed in the quarry but not identified.

Geology and Groundwater References

1. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geological Survey. Outstanding Geologic Features of Pennsylvania. Environmental Geology Report 7, 1979.

2. Pennsylvania Department of Internal Affairs, Bureau of Topographic and Geologic Survey. Groundwater Resources of Bucks County, Pennsylvania. Bulletin WII. 1955.

3. United States Department of Agriculture, Soil Conservation Service. Soil Survey of Bucks and Philadelphia Counties, Pennsylvania. July 1975.

ATTACHMENT 1

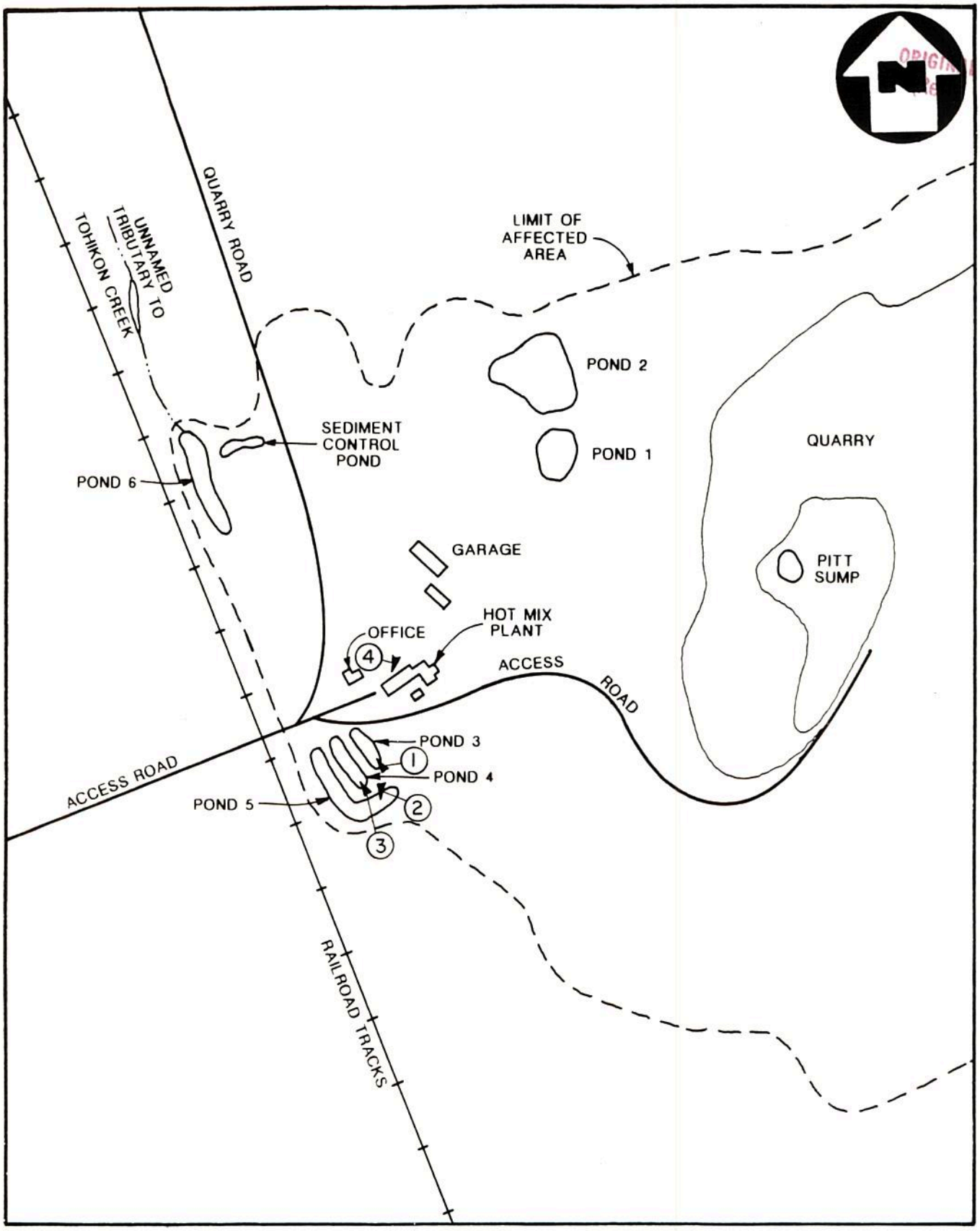


PHOTO LOCATION MAP

GENERAL CRUSHED STONE, QUAKERTOWN, PA

(NO SCALE)

NUS CORPORATION

Photo #1 Sedimentation pond #3

Photo #2 Sedimentation pond #4

Photo #3 Sedimentation pond #5 with Pump

Photo #4 Old foundation for asphalt proccessing.

ATTACHMENT 2

ORIGINAL (Red)

HOME WELL SURVEY

Home Owner's Name: (b) (6) [redacted] Date: 6/17/88

Address: _____ Home Phone: _____

_____ Work Phone: _____

_____

1. Please describe the type of home well you presently utilize:
(Check those which apply)

_____ Dug well

__✓__ Drilled by a rig; if so, please identify company (name, address, and phone):

[redacted] BUSINESS

(b) (6) [redacted]

_____ Other (describe) _____ (b) (6) [redacted]

1a. Please estimate the following: Year installed 1967

Date of last service _____

Company who serviced (name, address, and phone): [redacted] BUSINESS

_____

_____

2. Please provide the following measurements of your well:

a. Total depth: ~~22~~ 49 FEET

b. Well diameter: 6 IN

3. Please describe the casing material used in your well:

a. Composition

__✓__ Iron ____ PVC ____ Galvanized _____ Terra Cotta

_____ Other - Please Specify (if known)

b. Length (if known): 49 FT

ORIGINAL (Red)

HOME WELL SURVEY

Home Owner's **Name:** _____ Date: _____

4. Please describe, if known, any screening material used in your well:

   a. Length of screen: NONE

   b. Depth of screen in well: _____

5. Please indicate, if known, the depth to the groundwater in your well (from the surface):
   15 FT

6. Please indicate the composition of home plumbing (pipes) in your system:

   _____ Iron ✓ PVC _____ Galvanized _____ Lead
   _____ Other (describe): COPPER

7. Please describe the water pump used in your system:

   a. Location of the pump

   ✓ Inside the well (submersible pump); Depth in well: 75 FT
   _____ Outside the well (indicate location): _____

   b. Type of pump
   Branch (if known): GOULDS
   Capacity (gallons per minute): 29-17

   c. Estimate hours of pump operation per day: 2 HR

   d. Is storage tank used: ✓ Yes _____ No
   Type (material) _____ Capacity 80

8. a. Do you regularly or have you ever added chemicals directly to your well?
   (i.e., chlorine, clorox, etc.) _____ Yes ✓ No
   If yes, date last added: _____ Approximate amount added _____
   Compound (brand name): _____

ORIGINAL (Red)

HOME WELL SURVEY

Home Owner's Name: _____ Date: _____

b. Please describe any type of water treatment you are currently using (check those which apply): NONE

_____ Filtration — _____ Other (explain)

Type: _____ — _____

_____ Water Softeners — _____

Indicate Brand: _____ — _____

9. Please indicate any testing that has been done on your water: NONE

Date of testing: _____

Name of individual(s) responsible for testing: _____

10. Well Use: ✓ Drinking ✓ Other: _____

11. Do you notice color, taste, or odor problems with well water? _____ Yes ✓ No

If yes, identify: _____

Do you notice water supply problems? _____ Yes ✓ No

If yes, when: _____ how often: _____

12. Please indicate the type(s) of wastewater system used (check):

Sewer Line _____

Septic Tank 900 GAL Cesspool _____ Drain Field ✓

Distance to Well 100 FT

13. We may be taking water samples from many area homes in the near future. If your well is chosen for sampling, would you be willing to allow our NUS representatives to sample your well? Sampling involves collecting water from one of your indoor or outdoor spigots.

✓ Yes, I will allow my well to be sampled.

_____ No, I will not allow my well to be sampled.

HOME WELL SURVEY

Home Owner's **Name:**_____ Date:_____

If yes, please indicate the time of day which would be convenient for us to sample.

_____ Morning ___✓___ Afternoon _____ Evening

14. In the space below, please furnish a rough sketch of your property, indicating the location of your well and on-lot wastewater system, if applicable. Also indicate the location of the spigot you would prefer us to sample.